

Hang Gliding Training Manual

by DENNIS PAGEN



— LEARNING HANG GLIDING SKILLS —
FOR BEGINNER TO INTERMEDIATE PILOTS

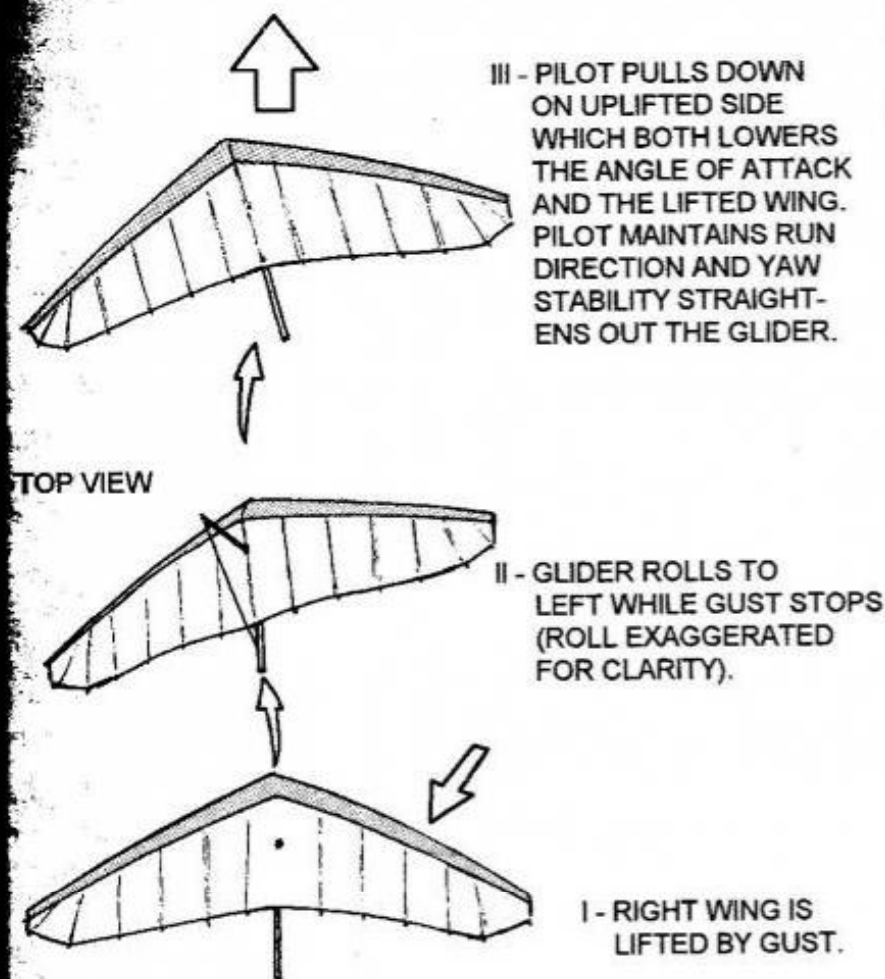


Figure 4-24: Handling a Lifted Wing

LEVEL FLIGHT

Up to now we have been concentrating on takeoff because that is the skill requiring the most initial practice. However, as you know, every takeoff is followed by a flight and landing. Here we'll look a little closer at the portion of your flight between the takeoff and landing.

You have become familiar with the need to maintain a light grip for control sensitivity during takeoff. This applies equally to the flying and landing phase as well. The secret to performing a level flight is to let the glider fly at trim. It will do so readily and fly straight as well as long as you have performed a level takeoff and the wind is smooth.

Your previous excursions into the air have been brief—probably too brief to remember—because you remained very low while practicing takeoffs. But as you are allowed to move up the hill a bit you gradually find yourself with enough time to think, remember and perfect your positioning. You also have time to relish the pure delight of gliding through the air with a swoosh and skimming over the grass like a quartering hawk.

Your Goal: *To fly level with a good steady airspeed with no alteration of course.*

▲ *Getting a wing lifted* — This can be caused by a sudden side gust. If you are in the air the cure is to bump your body to the high wing side. If you are still running on the ground, pull the nose down slightly for a little more speed and control and maintain your running path directly down the slope. The glider's natural yaw stability will straighten out the turn. Figure 4-24 shows this from a top view.

▲ *Turning during takeoff* — This is a problem that usually results from not relaxing on the control bar so that you can feel when the wings become unbalanced. Remember, you must balance both the weight and the wind forces on the glider. You can perform the same balancing controls during your run as you did standing still. Concentrate on this action all through the run and takeoff.

If you are in a turn in the air you must bump to the side to correct. In the next part you will learn all about these turn corrections.

Skill Check: Your basic takeoff skills have arrived when you can perform repetitive decisive takeoffs with a steady nose position, a healthy acceleration and a transition to the air with no wavering or dips.

▲ *Jumping into the glider* — Sometimes a pilot runs a short distance, then stops and lies down or leaps into prone position. This can be a serious problem if the glider is not yet ready to carry the pilot's full weight.

The cure to this problem is similar to the previous one. Make yourself take two running steps into the air to prevent the jumping act. Also make a conscious decision when to go prone, and stay upright with your feet below you for a distance away from the hill until the problem is solved. Learn to be aware of your takeoff process and count your steps, adding one or two more than normal.

▲ *Dropping both hands at once* — Again this is a matter of awareness. Practice saying out loud "one, two" as you drop each hand, one at a time. Also, remain upright until you are clear of the hill so you have time to think about going prone and doing it consciously.



Figure 8-2: Launch Running Practice

▲ *Choppy run* — Some pilots pound the ground furiously but go no place fast. To get evidence of this, count your steps (there's that launch awareness requirement) and compare them to those of others. To solve this problem, run your glider on the flat and concentrate on producing long strides, as in figure 8-2. Also, start out with a longer step than usual to set the pace.

▲ *Waiting too long* — As you experience new sites and situations you may become intimidated or simply unsure of yourself. This often manifests itself as a lack of confidence on launch and a long wait before taking off. Naturally it's proper to wait if conditions are cycling or unfavorable at the moment, but holding the glider for more than 5 seconds is rarely beneficial. Holding for more than 10 seconds in most cases is detrimental, (assuming you are self launching in reasonable conditions). If you can't take off within 5 seconds, set the glider back

down to avoid getting tired, regain your composure, recheck the wind, take a few deep breaths, lift and balance the glider, then go.

If you are having problems balancing the glider, perhaps you need a wire crew. Practice balancing the glider during ground handling so you aren't doing your learning at launch. Remember to turn the glider toward the lifted wing for proper balance. In any case, doing some repeated launch runs on the flat or the training hill and incorporating the 5 second timing will build your confidence. Also, making your flight plan before getting to takeoff and filing it away in your mind lets you concentrate on launch.

▲ *Lifted wing* — You must always start out with your wings in balance—this is a combination of weight and wind effect. If you aren't balanced, a wing can be lifted during the takeoff sequence. The same thing can occur, of course, due to a gust. The cure in both situations is to continue running downhill, reduce your angle of attack and make a correcting roll control. All these things must

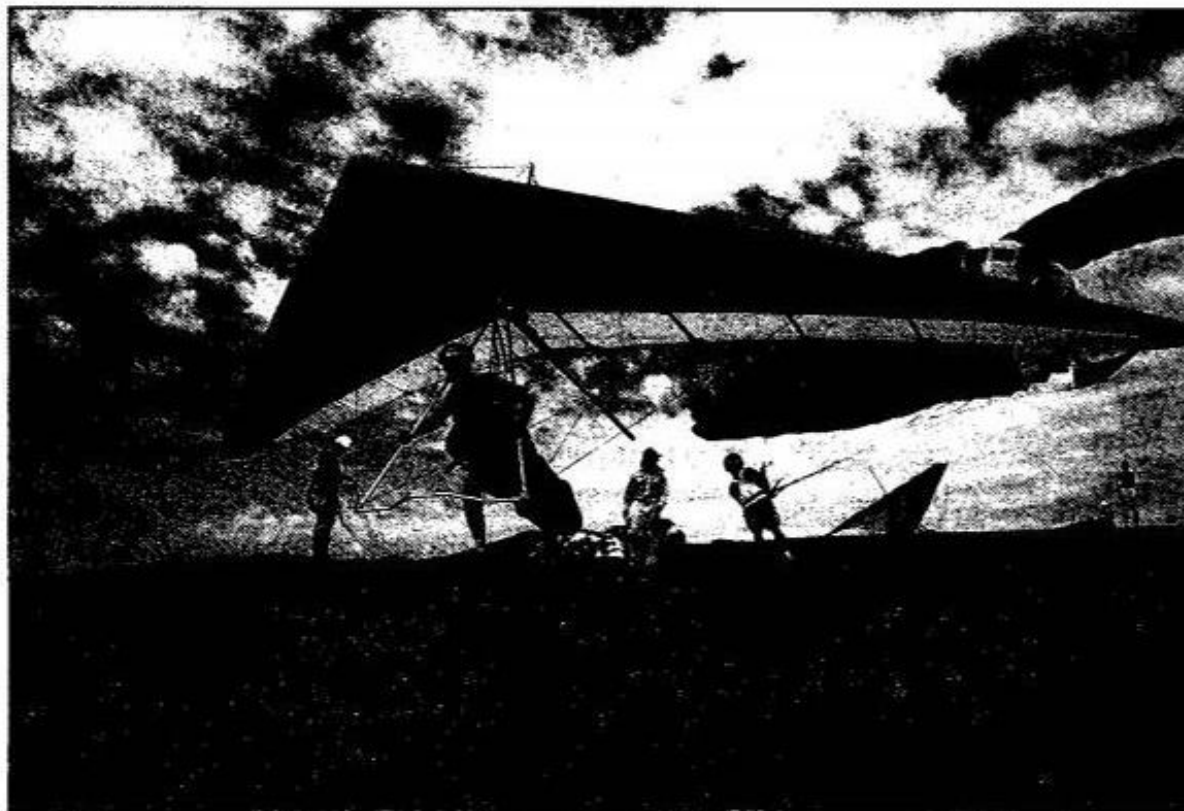
happen simultaneously, for you don't have a lot of time to act. The more sensitive you are to your glider's feedback, the more quickly you will correct and the less severe the effect of the lifted wing will be.

▲ *Glider problems* — Sometimes we may encounter a glider that is not balanced when we hold it, is heavy or has a control bar too large for our body. A *tail heavy* glider is one that has too much weight rearward when held in the proper takeoff attitude. A *nose heavy* glider is one with too much weight forward. Fortunately, modern gliders do not exhibit nose heavy balance. This matter of balance is called *static balance* and is discussed in Chapter 10.

In both cases you must apply some forces with your hands in order to keep the glider at the correct angle. Be aware that as soon as the glider lifts its own weight, it will fly in trim and your hands must lighten up their input. A tail heavy glider is better than a nose heavy one, for you merely hold in on the bar and ease off pressure as your run progresses. With a nose heavy glider you have to lock your shoulders or head against the uprights to act as a lever for your hands. A nose heavy glider tempts pilots into launching with the nose high and pulling it down during the run. Needless to say, neither of these glider deficiencies are desirable in novice gliders.

Heavy gliders are not uncommon (some pilots argue that every glider is too heavy). With a heavy glider we must be cautious to start our run slowly with a perfect attitude and accelerate gradually so the glider lifts itself as soon as possible. Expect to take an extra step with a heavy glider on a light wind day.

If you find the control bar too big for you, refer to the special note on small people in Chapter 10. In general, you must use more finesse to balance the glider and more patience to make sure it remains balanced before you run. Also, your base tube clearance with the ground may be less than normal, so check for the presence of weeds, rocks or other bar grabbers before you attempt takeoff.



A pilot launches a Moyes XT intermediate glider in Australia.